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10/748,102	12/29/2003	Chiang Yeh	134135	6986

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EXAMINER	
PATEL, JAY P	
ART UNIT	PAPER NUMBER
2419	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/748,102	YEH ET AL.	
	Examiner	Art Unit	
	JAY P. PATEL	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shabtay et al. (US Patent 7093027 B1) in view of Susnow (US Patent 6751235 B1) further in view of Trinh et al. (US Patent 7310348 B2) further in view of Boivie et al. (US Patent 6842783 B1).

In regards to claim 1, Shabtay illustrates in figure 3, a network inclusive of local stack 51, remote stack 53 (both of which are composed of edge switches for an MPLS network) and a core section (network of nodes); the network is managed (provision, administration and management) by network management system 68 (NMS 68) (central management module to which the network of nodes are coupled to). The edge switches are a part of the VLAN portions on both sides of the MPLS core (see column 12, lines 25-35 and lines 52-61) (creating a network composed of the nodes and the central management module).

If further regards, the VLAN portions are composed of the edge switches and the core switches and each edge switch is provisioned in both the primary and the protection VLANs (see column 13, lines 55-65) (traffic engineering functions performed by the nodes). Also, the NMS 68 provides management and provision functions for the

VLANs (see column 13, lines 41-54) (central management module performing traffic engineering functions).

In further regards to claim 1, Shabtay fails to teach, in a metropolitan area network (MAN) the central management module and the network of nodes located in a single chassis. Susnow teaches the above-mentioned limitation (see column 2, lines 46-48). Figure 3 illustrates, a network composed of a multi-stage switch 300 comprised of a plurality of switches for allowing host systems and target systems to communicate to a large number other host systems and target systems. A central network manager 310 may be incorporated as part of either the host processing system 330, the second network 350, the I/o device 370 or the remote system 390 (thus being on the same chassis as the network of nodes) (see column 3, lines 35-42). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have a central network manager be incorporated in one of the nodes as taught by Susnow and incorporate it into the teachings of Shabtay. The proper motivation to combine would be to allow core switches and edge switches to be present on a single architecture.

In further regards to claim 1, Shabtay and Susnow fail to particularly teach, a network processor subsystem inclusive of a network processor and a traffic management co-processor where the network processor is operable to make traffic management decisions with support from the traffic management co-processor. Trinh however, teaches the above-mentioned limitation. Trinh teaches a network processor, that optimally manages network traffic e.g. guarantees and sustains a particular line rate. The network processor also includes a traffic manager (see column 6, lines 9-27).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to incorporate a network processor and a traffic manager as taught by Trinh into the systems of Shabtay and Susnow. The motivation would be have a singe traffic management and processing system to make traffic specific decisions.

In yet further regards to claim 1, although Shabtay teaches sending hello messages to edge switches on the other end of the alternate VLAN, the hello message acknowledges a primary path failure and not the reason (see column 14, lines 14-25 and column 15, lines 40-46). Therefore, Shabtay fails to teach sending a feedback regarding an offending source to the central management module or another node in the network. Susnow also fails to teach the above-mentioned limitation.

Boivie teaches the above-mentioned limitation. Boivie teaches in figures 1 and 2, a bandwidth manager system. Furthermore, the amount of bandwidth used by a client is monitored and if there is a violation in the amount of bandwidth used, a feedback can be generated to reduce the number of requests from the client (see figures 1 and 2, column 6, lines 5-15 in Boivie). Therefore it would have been obvious to one skilled in the art at the time the invention was made to incorporate the feedback mechanism taught by Boivie into the teachings of Shabtay, Susnow and Trinh. The suggestion to combine would be to provide differentiated services by supporting multilevel selective-packet-drop criteria (see column 3, lines 20-24 in Boivie). The motivation to combine would be to prevent any single customer from monopolizing the entire bandwidth resource (see column 3, lines 13-16 in Boivie).

In regards to claim 2, Shabtay illustrates edge switches in stacks 51 and 53 in figure 3.

In regards to claim 3, Shabtay illustrates network management system 68 in figure 3.

In regards to claim 4, Shabtay illustrates protection path from user a (source) to user B (destination) in figure 3.

In regards to claims 5-8 and 14-15, Shabtay in combination with Susnow, Trinh and Boivie teaches all the limitations of parent claim 1. Shabtay, Trinh and Susnow fail teach traffic shaping comprising rate policing, performing differentiated services, providing end-to-end QoS or the detection of the offending source. Boivie teaches the above-mentioned limitation.

Boivie teaches in figures 1 and 2, a bandwidth manager system. Furthermore, the amount of bandwidth used by a client (identifying the offending source and policing) is monitored and if there is a violation in the amount of bandwidth or a SLA (end-to-end QoS) used, a feedback can be generated to reduce the number of requests from the client (see figures 1 and 2, column 6, lines 5-15 in Boivie) in order to provide differentiated services for various types of traffic (also see column 4, lines 38-41 in Boivie). Therefore it would have been obvious to one skilled in the art at the time the invention was made to incorporate the feedback mechanism taught by Boivie into the teachings of Shabtay, Trinh and Susnow. The suggestion to combine would be to provide differentiated services by supporting multilevel selective-packet-drop criteria (see column 3, lines 20-24 in Boivie). The motivation to combine would be to prevent

any single customer from monopolizing the entire bandwidth resource (see column 3, lines 13-16 in Boivie).

In regards to claims 9 and 10 Shabtay teaches sending hello messages to edge switches on the other end of the alternate VLAN, the hello message acknowledges a primary path failure (see column 14, lines 14-25 and column 15, lines 40-46).

In regards to claims 11 and 12, Shabtay illustrates in figure 3, a network inclusive of local stack 51, remote stack 53 (both of which are composed of edge switches for an MPLS network) (smart nodes performing traffic engineering). Furthermore, the edge switches have a packet processor (see column 6, lines 33-35).

In regards to claim 13, Figure 3 in Shabtay illustrates primary path 60 and alternate path 62; when link failure occurs the edge switches switch to the alternate path (see column 13, lines 55-58).

3. Claims 16-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shabtay et al. (US Patent 7093027 B1) in view of Boivie et al. (US Patent 6842783 B1) further in view of Susnow (US Patent 6751235 B1) further in view of Trinh et al. (US Patent 7310348 B2).

In regards to claim 16, Shabtay illustrates in figure 3, a network inclusive of local stack 51, remote stack 53 (both of which are composed of edge switches, which have a network processor (switching engine) for an MPLS network) and a core section (switch fabric); the network is managed (provision, administration and management) by network management system 68 (NMS 68) (central management module to which the switch

fabric is coupled). The edge switches are a part of the VLAN portions on both sides of the MPLS core (see column 12, lines 25-35 and lines 52-61).

In further regards, the VLAN portions are composed of the edge switches, which have a packet processor (see column 6, lines 33-35) (also see column 13, lines 55-65) (traffic engineering functions performed by the network processor subsystem). Also, the NMS 68 provides management and provision functions for the VLANs (see column 13, lines 41-54) (central management module performing traffic engineering functions).

In further regards to claim 16, although Shabtay teaches sending hello messages to edge switches on the other end of the alternate VLAN, the hello message acknowledges a primary path failure and not the reason (see column 14, lines 14-25 and column 15, lines 40-46). Therefore, Shabtay fails to teach sending a feedback regarding an offending source to the central management module or another node in the network.

Boivie teaches the above-mentioned limitation. Boivie teaches in figures 1 and 2, a bandwidth manager system. Furthermore, the amount of bandwidth used by a client is monitored and if there is a violation in the amount of bandwidth used, a feedback can be generated to reduce the number of requests from the client (see figures 1 and 2, column 6, lines 5-15 in Boivie). Therefore it would have been obvious to one skilled in the art at the time the invention was made to incorporate the feedback mechanism taught by Boivie into the teachings of Shabtay. The suggestion to combine would be to provide differentiated services by supporting multilevel selective-packet-drop criteria (see column 3, lines 20-24 in Boivie). The motivation to combine would be to prevent

any single customer from monopolizing the entire bandwidth resource (see column 3, lines 13-16 in Boivie).

In further regards to claim 16, neither Shabtay nor Boivie suggest implementation in a metropolitan area network. Susnow teaches the above-mentioned limitation (see column 2, lines 46-48). Figure 3 illustrates, a network composed of a multi-stage switch 300 comprised of a plurality of switches for allowing host systems and target systems to communicate to a large number other host systems and target systems. A central network manager 310 may be incorporated as part of either the host processing system 330, the second network 350, the I/o device 370 or the remote system 390 (thus being on the same chassis as the network of nodes) (see column 3, lines 35-42). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have a central network manager be incorporated in one of the nodes as taught by Susnow incorporated in to the teachings of Shabtay and Boivie. The proper motivation to combine would be to allow core switches and edge switches to be present on a single architecture.

In further regards to claim 16, Shabtay, Boivie and Susnow fail to particularly teach, a network processor subsystem inclusive of a network processor and a traffic management co-processor where the network processor is operable to make traffic management decisions with support from the traffic management co-processor. Trinh however, teaches the above-mentioned limitation. Trinh teaches a network processor, that optimally manages network traffic e.g. guarantees and sustains a particular line rate. The network processor also includes a traffic manager (see column 6, lines 9-27).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to incorporate a network processor and a traffic manager as taught by Trinh into the systems of Shabtay, Boivie and Susnow. The motivation would be have a singe traffic management and processing system to make traffic specific decisions.

In regards to claim 17 Shabtay teaches sending hello messages to edge switches on the other end of the alternate VLAN, the hello message acknowledges a primary path failure (see column 14, lines 14-25 and column 15, lines 40-46).

In regards to claim 18, Shabtay in combination with Boivie, Trinh and Susnow teaches all the limitations of patent claim 16. Shabtay, Trinh and Boivie fail to teach including the switch engine, the switch fabric and the central management module on a single chassis.

Susnow teaches the above-mentioned limitation (see column 2, lines 46-48). Figure 3 illustrates, a network composed of a multi-stage switch 300 comprised of a plurality of switches for allowing host systems and target systems to communicate to a large number other host systems and target systems. A central network manager 310 may be incorporated as part of either the host processing system 330, the second network 350, the I/o device 370 or the remote system 390 (thus being on the same chassis as the network of nodes) (see column 3, lines 35-42). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have a central network manager be incorporated in one of the nodes as taught by Susnow

incorporated in to the teachings of Shabtay, Trinh and Boivie. The proper motivation to combine would be to allow core switches and edge switches to be present on a single architecture.

In regards to claim 19, Shabtay illustrates in figure 3, a network inclusive of local stack 51, remote stack 53 (both of which are composed of edge switches, which have a network processor) (a network of nodes) and a core section (switch fabric); the network is managed (provision, administration and management) by network management system 68 (NMS 68) (central management module to which the switch fabric is coupled). The edge switches are a part of the VLAN portions on both sides of the MPLS core (see column 12, lines 25-35 and lines 52-61).

In further regards, the VLAN portions are composed of the edge switches, which have a packet processor (see column 6, lines 33-35) (also see column 13, lines 55-65) (traffic engineering functions distributed between at least two of the nodes). Also, the NMS 68 provides management and provision functions for the VLANs (see column 13, lines 41-54).

In further regards to claim 19, neither Shabtay nor Boivie suggest implementation in a metropolitan area network. Susnow teaches the above-mentioned limitation (see column 2, lines 46-48). Figure 3 illustrates, a network composed of a multi-stage switch 300 comprised of a plurality of switches for allowing host systems and target systems to communicate to a large number other host systems and target systems. A central network manager 310 may be incorporated as part of either the host processing system 330, the second network 350, the I/o device 370 or the remote system 390 (thus being

on the same chassis as the network of nodes) (see column 3, lines 35-42). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have a central network manager be incorporated in one of the nodes as taught by Susnow incorporated in to the teachings of Shabtay and Boivie. The proper motivation to combine would be to allow core switches and edge switches to be present on a single architecture.

In further regards to claim 19, Shabtay, Boivie and Susnow fail to particularly teach, a network processor subsystem inclusive of a network processor and a traffic management co-processor where the network processor is operable to make traffic management decisions with support from the traffic management co-processor. Trinh however, teaches the above-mentioned limitation. Trinh teaches a network processor, that optimally manages network traffic e.g. guarantees and sustains a particular line rate. The network processor also includes a traffic manager (see column 6, lines 9-27).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to incorporate a network processor and a traffic manager as taught by Trinh into the systems of Shabtay, Boivie and Susnow. The motivation would be have a singe traffic management and processing system to make traffic specific decisions.

In regards to claim 20, in figure 3 from Shabtay, the network is managed (provision, administration and management) by network management system 68 (NMS 68) (central management module to which the switch fabric is coupled to).

If further regards, the VLAN portions are composed of the edge switches and the core switches and each edge switch is provisioned in both the primary and the protection VLANs (see column 13, lines 55-65) (traffic engineering functions performed by the nodes). Also, the NMS 68 provides management and provision functions for the VLANs (see column 13, lines 41-54) (central management module performing traffic engineering functions).

In regards to claims 21-24 and 26-28, Shabtay in combination with Boivie teaches all the limitations of parent claim 19. However Shabtay fails to teach traffic shaping comprising rate policing, performing differentiated services, providing end-to-end QoS or the detection of the offending source and responding to the feedback. Boivie teaches the above-mentioned limitation.

Boivie teaches in figures 1 and 2, a bandwidth manager system. Furthermore, the amount of bandwidth used by a client (identifying the offending source and policing) is monitored and if there is a violation in the amount of bandwidth or a SLA (end-to-end QoS) used, a feedback can be generated to reduce the number of requests from the client (see figures 1 and 2, column 6, lines 5-15 and lines 37-39 in Boivie) in order to provide differentiated services for various types of traffic (also see column 4, lines 38-41 in Boivie). Therefore it would have been obvious to one skilled in the art at the time the invention was made to incorporate the feedback mechanism taught by Boivie into the teachings of Shabtay, Susnow and Trinh. The suggestion to combine would be to provide differentiated services by supporting multilevel selective-packet-drop criteria (see column 3, lines 20-24 in Boivie). The motivation to combine would be to prevent

any single customer from monopolizing the entire bandwidth resource (see column 3, lines 13-16 in Boivie).

In regards to claim 25, Figure 3 in Shabtay illustrates primary path 60 and alternate path 62; when link failure occurs the edge switches switch to the alternate path (see column 13, lines 55-58).

Response to Arguments

Applicant's arguments filed on12/22/2008 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAY P. PATEL whose telephone number is (571)272-3086. The examiner can normally be reached on Mon.-Thurs.: 8:00 a.m.- 6:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571)272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ronald Abelson/
Primary Examiner, Art Unit 2419